

Applicant: Erich Becker
Application No.: 10/541,850

IN THE CLAIMS

1. (Currently amended) Diaphragm pump (1) comprising a working diaphragm (3), which, during pumping movements, oscillates between a bottom dead center and a top dead center, which delimits a pump chamber (7) between the working diaphragm and a pump chamber wall (6), and which rests against the pump chamber wall (6) in the top dead center, the working diaphragm (3) has an inner and an outer annular zone (8, 9), which are deformable during the pumping movements, a stiffened diaphragm area that is generally non-deformable during the pumping movements is arranged between the deformable annular zones (8, 9), and the working diaphragm (3) is stiffened in the stiffened diaphragm area by support ribs (10), which are oriented in a radial direction and are spaced apart from each other in a circumferential direction, and which are arranged on a lower side of the diaphragm facing away from the pump chamber wall (6).
2. (Previously presented) Diaphragm pump according to Claim 1, wherein the pump chamber wall is concave.
3. (Currently amended) Diaphragm pump ~~according to Claim 1 comprising a working diaphragm (3), which, during pumping movements, oscillates between a bottom dead center and a top dead center, which delimits a pump chamber (7) between the working diaphragm and a pump chamber wall (6), and which rests against the pump chamber wall (6) in the top dead center, the working diaphragm (3) has an inner and an outer annular zone (8, 9), which are deformable during the pumping movements, a stiffened diaphragm area that is generally non-deformable during the pumping movements is arranged between the annular zones (8, 9), and the working diaphragm (3) is stiffened in the stiffened diaphragm area by support ribs (10), which are oriented in a radial direction and are spaced apart from each~~

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other in a circumferential direction, and which are arranged on a lower side of the diaphragm facing away from the pump chamber wall (6), wherein the support ribs (10) have a curved longitudinal extent.

4. (Previously presented) Diaphragm pump according to Claim 1, the support ribs (10) have a straight longitudinal extent.

5. (Previously presented) Diaphragm pump ~~according to Claim 1 comprising a working diaphragm (3), which, during pumping movements, oscillates between a bottom dead center and a top dead center, which delimits a pump chamber (7) between the working diaphragm and a pump chamber wall (6), and which rests against the pump chamber wall (6) in the top dead center, the working diaphragm (3) has an inner and an outer annular zone (8, 9), which are deformable during the pumping movements, a stiffened diaphragm area that is generally non-deformable during the pumping movements is arranged between the annular zones (8, 9), and the working diaphragm (3) is stiffened in the stiffened diaphragm area by support ribs (10), which are oriented in a radial direction and are spaced apart from each other in a circumferential direction, and which are arranged on a lower side of the diaphragm facing away from the pump chamber wall (6), wherein the support ribs (10) deviate from radial lines.~~

6. (Previously presented) Diaphragm pump according to Claim 1, wherein the support ribs (10) are spaced apart from each other in a circumferential direction and have a same direction of curvature or deviation from radial lines.

7. (Previously presented) Diaphragm pump according to Claim 1, wherein a side of the support ribs (10) facing the pump chamber wall (6) is adapted in shape to a

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contour of the pump chamber wall (6).

8. (Previously presented) Diaphragm pump according to Claim 5, wherein the deviation is up to about plus or minus 30°.